REMARKS:

I.   CLAIM AMENDMENTS

Claims 14, 32, 71 and 85 are amended for purposes of clarity. Claims 1, 4, 5, 7-13, 15-18, 20-31, 33-62, 66, 73, 79, 80, 90 and 96-113 were previously canceled without prejudice or disclaimer. Claim 68 is canceled herein without prejudice or disclaimer. Claim 142 is newly added. As a non-limiting example, claim 142 recites subject matter similar to a combination of claims 81-83 and 127-131. No new matter is added.

It is believed that no claim fees are due at this time owing to the cancellation of claims during prosecution of this application. That is, it is believed that the highest number of claims previously paid for was 62 total claims (i.e., 42 extra) with 24 independent claims (i.e., 21 extra), paid for at the time of national entry of the instant application. As amended herein, there are 62 total claims currently pending with 8 independent claims.

II.   CLAIM REJECTIONS

Claims 2, 3, 6, 14, 19, 32, 63-65, 67, 69-72, 74-78, 81-89, 91-95 and 114-142 are currently pending with claims 14, 19, 32, 75, 81, 85, 92 and 142 being independent claims.

The Examiner rejected claims 2, 3, 14, 19, 32, 63, 65, 67-69, 71, 74-76, 78, 81-86, 88, 91-93, 95, 115-120, 122-125, 127-129, 131-135 and 137-140 under 35 U.S.C. §103(a) as being unpatentable over *Proctor et al.* (U.S. Patent No. 5,519,779, referred to herein as "*Proctor*") in view of *El-Maleh* (U.S. Patent Application Publication No. 2002/0101844) and further in view of *Xu et al.* (U.S. Patent No. 6,885,638, referred to herein as "*Xu*"). *See pp. 3-7 of the Final Office Action.* The Examiner rejected claims 6, 64, 70, 77, 87 and 94 under 35 U.S.C. §103(a) as being unpatentable over *Proctor* in view of *El-Maleh* and *Xu* and further in view of *Jacobs et al.* (U.S. Patent No. 5,414,796, referred to herein as "*Jacobs*"). *See pp. 7-8 of the Final Office Action.* The Examiner rejected claims 72, 89, 114, 121, 126, 130, 136 and 141 under 35 U.S.C. §103(a) as being unpatentable over *Proctor* in view of *El-Maleh* and *Xu* and further in view of *Garg* ("IS-95 CDMA and cdma2000," Prentice Hall, 2000). *See pp. 8-*

9 of the Final Office Action. These rejections are respectfully disagreed with and are traversed below.

To warrant the §103(a) rejection of the pending claims, in view of all factual information, it must be determined that the claimed invention "as a whole" would have been obvious to one of ordinary skill in the art at the time the invention was made. The conclusion must be reached on the basis of the facts gleaned from the prior art. *See MPEP §2142.*

"All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.Cir. 1988). *See MPEP §§2142, 2143.03.*

As stated in MPEP §706: "The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity."

37 C.F.R. §1.104(c)(2) states: "In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, **the particular part relied on must be designated <u>as nearly as practicable</u>. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.**"

(A)   INITIAL NOTE

As an initial matter, it is noted that on pages 3-7 of the Final Office Action the Examiner rejected claims 2, 3, 14, 19, 32, 63, 65, 67-69, 71, 74-76, 78, 81-86, 88, 91-93, 95, 115-120, 122-125, 127-129, 131-135 and 137-140 in view of a combination of three references: *Proctor*, *El-Maleh* and *Xu*. In this rejection, the Examiner did not separate the rejection of the individual claims, merely noting on page 3 of the Final Office Action that these claims

"recite following limitations in various combinations."

While *some* of the above-identified claims may be considered similar to others of these claims, it is submitted that all of these claims, considered in total, **do not** recite identical subject matter. The Examiner failed to consider these claims individually and did not provide separate rejections and explanations for the different claims and the different subject matter. It is difficult for the Applicants to accurately respond to the Examiner's claim rejection for all of these claims without further explanation regarding the Examiner's interpretation of the cited art (e.g., with citations to the cited art and explanations of the Examiner's reasoning, such as the alleged correspondence between the claimed subject matter and the disclosure of the cited art).

Furthermore, and by way of example, it is noted that the Examiner does not appear to utilize *El-Maleh* when rejecting independent claims 14, 32 and 85. As such, it is erroneous to reject these claims for obviousness in view of *El-Maleh*.

In addition, it appears that in the Final Office Action the Examiner did not provide a complete rejection of all of the independent claims including, for example, independent claim 81. For example, no citation of prior art or explanation therefor is provided for the generating and inserting steps of claim 81.

Thus, in accordance with MPEP §706 and 37 C.F.R. §1.104(c)(2), the Examiner's rejection in the Final Office Action of *all* of the above-identified claims in view of one brief explanation is respectfully traversed as being insufficient. For example, the Examiner failed to identify one or more portions of the cited art that allegedly disclose or suggest "wherein the first communication mode and the second communication mode are for a first communication scheme, wherein a first system uses the first communication scheme, wherein the method enables interoperation between the first system and a second system, wherein the second system uses a second communication scheme" (claim 3); "wherein the first system is a code division multiple access 2000 (CDMA2000) system using a variable bitrate wideband (VBR-WB) codec and the second communication system is a third generation partnership project

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(3GPP) system using an adaptive multi-rate-wideband (AMR-WB) codec" (claim 114); "wherein the first communication mode of the first communication scheme is interoperable with a communication mode of the second communication scheme and the second communication mode of the first communication scheme is not interoperable with the communication mode of the second communication scheme" (claim 115); and "wherein the particular communication mode comprises a signaling half rate communication mode or an interoperable half rate communication mode" (claim 116).

It is respectfully requested that, should a further Office Action be issued by the Examiner, the Examiner consider the subject matter recited in these claims and provide separate rejections for these claims with separate identifications of portions of the cited art and separate explanations regarding any alleged correspondence.

(B)   INDEPENDENT CLAIM 14
Unamended claim 14 recited:

> A method comprising:
>
> receiving a request to transmit a frame using a second communication mode to reduce bit rate during transmission of said frame, wherein the frame comprises signal-coding parameters representative of a sound signal and wherein the frame is encoded in accordance with a first communication mode;
>
> in response to the request, dropping a portion of the signal-coding parameters to enable transmission of the frame using the second communication mode; and
>
> **inserting information into the frame, wherein the information indicates that the frame is encoded in accordance with a particular communication mode that involves dropping the portion of the signal-coding parameters.**

The above-emphasized elements of claim 14 were introduced to the claim in the Response to

Office Action filed on October 20, 2009 in response to the previous Non-Final Office Action. Therein, it was argued that *Proctor* does not disclose or suggest at least these elements. In the instant Final Office Action, the Examiner responded by arguing that *Xu* discloses these elements: "Xu, fig. 3, frame format with information bit segments 302 and 308; fig. 5 and fig. 6, shows 302 has 3 bits and 308 has 3 bits, indicating a particular communication mode, such as full rate, or half rate." *See p. 7 of the Final Office Action.*

As noted above in the Interview Summary, the Examiner clarified that he is assuming that the presence of, usage of and reference to a half rate (HR) mode implies that information is dropped (from a full rate (FR) mode) in order to obtain the HR. Thus, the Examiner argued that an identification of a HR mode (as in *Xu*) corresponds to the above-emphasized elements of claim 14.

This interpretation of the relationship between HR and FR modes is very much in error. One of ordinary skill in the art would not assume nor infer the presence of such a relationship. Furthermore, there is no disclosure or suggestion in the instant application, nor in any art cited by the Examiner, that would support such an interpretation.

For example, a HR frame of the type shown in Table 3 of the instant application (*see p. 27*) **CANNOT** be derived from a FR frame of the type shown in Table 2 of the instant application (*see p. 26*) by dropping some of the bits/parameters. **IN CONTRAST**, a HR frame of the type shown in Table 5 of the instant application (the interoperable HR; *see p. 32*) **CAN** be derived from a FR frame of the type shown in Table 2 by dropping some of the bits/parameters.

As a further example, one of ordinary skill in the art would appreciate that a HR frame of the type shown in Table 3 is directly decodable. In contrast, a HR frame of the type shown in Table 5 (the interoperable HR) is **NOT** directly decodable. For example, prior to decoding an interoperable HR frame, replacement data (e.g., randomly-generated information) must be re-introduced to replace the prior dropping of bits/parameters. Only after the replacement information (e.g., replacement signal-coding parameters) is inserted can the frame be

properly decoded (e.g., as a FR frame).

Based on the above, it is clear that the Examiner's assumption that a HR mode necessarily implies that information was dropped from a FR made to obtain the HR is technically incorrect. For at least this reason, the Examiner's rejection of claim 14 as being obvious in view of *Proctor*, *El-Maleh* and *Xu* is erroneous.

With further reference to *Xu* and the Examiner's application thereof, *Xu* is directed to a communication system and method for assigning packet classification data to packets in order to define various classes with each class representing a different transmission priority over a backhaul link. *Xu* further discloses for a control signaling class and a voice class assigning each of the packets additional drop precedent data that defines a further packet drop priority within the respective class. *Xu* uses the priorities to drop a queued classified packet. *See abstract.*

As noted above, *Xu* uses the packet classification data and associated priorities in order to drop some packets (ones of lower priority) before other packets (one of higher priority) in view of quality of service (for the other packets). Each class defined by the packet classification data 302 represents a different backhaul link transmission priority. *Col. 4, lines 24-36.* The drop precedence data 308 prioritizes packets within a class, thus providing another level of priority beyond the packet classification data 302. *Col. 4, line 64-col. 5, line 16 and col. 5, lines 33-43.*

While *Xu* provides an example wherein the drop precedence data 308 indicates the rate in use for a voice frame (FIG. 5: full rate, half rate, quarter rate, eighth rate), it should be noted that these indications are still in the context of indicating a relative priority among the classified packets. That is, neither the packet classification data 302 nor the drop precedence data 308 "indicates that the frame is encoded in accordance with a particular communication mode that involves dropping the portion of the signal-coding parameters," as recited in claim 14.

For example, in accordance with *Xu*, a packet classification data 302 of "011" and a drop

precedence data 308 of "111" for a reverse link frame (see FIG. 5) may indicate that the frame is in the voice frame rate class and is a half rate frame with FQI = 1. These values may further indicate that such a frame is to be dropped after (has a higher priority than) another frame in the voice frame rate class (011) that is eighth rate with FQI = 0 (000). These values may further indicate that such a frame is to be dropped before (has a lower priority than) a frame in the control signaling class (100).

However, this example frame may be dropped or it may not be dropped, depending on the priorities of other queued frames. For an individual frame, neither the packet classification data 302 nor the drop precedence data 308 actually indicates whether or not any information has been dropped, is dropped or will be dropped. These are merely priorities to be compared against other queued frames/packets. Furthermore, none of the individual disclosed communication modes specifically "involve[] dropping [a] portion of the signal-coding parameters," as recited in claim 14.

Thus, in contrast to the Examiner's arguments, *Xu* does not disclose or suggest **"inserting information into the frame, wherein the information indicates that the frame is encoded in accordance with a particular communication mode that involves dropping the portion of the signal-coding parameters,"** as recited in unamended claim 14. Furthermore, neither *Proctor* nor *El-Maleh*, considered separately or in combination, disclose or suggest at least these elements of claim 14. In addition, it is noted that the Examiner does not argue otherwise. Thus, unamended claim 14 is patentable and should be allowed.

As amended herein, claim 14 recites in part:

> inserting information into the frame, wherein the information indicates to a receiver that the frame is encoded in accordance with a particular communication mode that involves dropping the portion of the signal-coding parameters and wherein the information enables the receiver to process the frame and obtain, from the frame as transmitted in accordance with the second

<u>communication mode, a version of the frame encoded in accordance with the
first communication mode.</u>

Thus, not only does the information indicate "that the frame is encoded in accordance with a
particular communication mode that involves dropping the portion of the signal-coding
parameters" (e.g., an interoperable HR mode), but the information further "enables the
receiver to process the frame and obtain [] a version of the frame encoded in accordance with
the first communication mode." For example, the information enables the receiver to use the
knowledge that the frame is encoded in an interoperable HR mode (the second
communication mode) to regenerate the dropped portion of the signal-coding parameters,
enabling decoding of the frame in accordance with the FR mode (the first communication
mode).

While *Xu* discloses that the drop precedence data 308 indicates the rate in use for a voice
frame, *Xu* cannot be seen to disclose or suggest that the drop precedence data 308, nor any
other data utilized by *Xu*, "enables the receiver to process the frame and obtain [] a version of
the frame encoded in accordance with the first communication mode," as recited in amended
claim 14.

It is briefly noted that neither *Proctor* nor *El-Maleh*, considered individually or in
combination, is seen to disclose or suggest the above-noted elements of amended claim 14.

The features recited in claim 14 are not disclosed or suggested in the cited art. *Proctor, El-
Maleh* and *Xu* cannot be seen to render obvious the subject matter recited in claim 14.
Therefore, claim 14 is patentable and should be allowed.

Though dependent claims 2, 3, 6, 63-65, 67 and 114-116 contain their own allowable subject
matter, these claims should at least be allowable due to their dependence from allowable
claim 14.

Independent claims 19, 32 and 85 claim similar features as claim 14 noted above. For the

same reasons stated above with respect to claim 14, *Proctor*, *El-Maleh* and *Xu* cannot be seen to render obvious independent claims 19, 32 and 85. Therefore, these claims are patentable over the cited prior art and should be allowed.

Though dependent claims 69-72, 74, 86-89, 91, 117-126 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable independent claims 32 and 85.

Independent claims 75, 81 and 92 recite at least one element similar to some of the above-noted portion of independent claim 14. As a non-limiting example, claim 81 recites in part: "receiving a frame using a second communication mode, **wherein the frame comprises information** and a second portion of signal-coding parameters, **wherein the information indicates that the frame is encoded in accordance with a particular communication mode that involves dropping a first portion of the signal-coding parameters** instead of a first communication mode to reduce bit rate during transmission of said frame." For the same reasons stated above with respect to claim 14, *Proctor*, *El-Maleh* and *Xu* cannot be seen to render obvious independent claims 75, 81 and 92. Therefore, these claims are patentable over the cited prior art and should be allowed.

Though dependent claims 76-78, 82-84, 93-95 and 127-141 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable independent claims 75, 81 and 92.

(C)   INDEPENDENT CLAIM 81

Independent claim 81 recites:

A method comprising:

receiving a frame using a second communication mode, wherein the frame comprises information and a second portion of signal-coding parameters, wherein the information indicates that the frame is encoded in

accordance with a particular communication mode that involves dropping a
first portion of the signal-coding parameters instead of a first communication
mode to reduce bit rate during transmission of said frame;

in response to said information, generating replacement signal-coding
parameters to replace the first portion of the signal-coding parameters dropped
to reduce the bit rate during transmission of the frame; and

inserting the generated replacement signal-coding parameters into the
received frame to enable further transmission of the frame in accordance with
the first communication mode.

From the telephone interview, it is understood that the Examiner is applying *El-Maleh* as
allegedly to disclosing or suggesting the generating and inserting steps of claim 81, for
example. The Examiner identified paragraphs [0009]-[0012] and [0027]-[0028] of *El-Maleh*.

As noted above, in the Final Office Action the Examiner did not provide a complete rejection
of independent claim 81. For example, the Examiner did not provide a citation of prior art or
explanation therefor for the generating and inserting steps of claim 81. As such, the above
interpretation of the Examiner's rejection of claim 81 will be used. Should the undersigned
be in error, it is requested that the Examiner specify the rejection more clearly in a further
action, should one be forthcoming.

El-Maleh discloses a method and apparatus for interoperability between continuous
transmission (CTX) and discontinuous transmission (DTX) systems during the transmission
of silence or background noise. *See abstract.* As an example, *El-Maleh* discloses that CTX
eighth rate frames (continuous eighth rate encoded noise frames) are translated to
discontinuous silence insertion descriptor (SID) frames for transmission to DTX systems.
Similarly, *El-Maleh* discloses that discontinuous SID frames are translated to continuous
eighth rate encoded noise frames for decoding by a CTX system. *See abstract, para. [0021].*

In paragraphs [0027]-[0028], *El-Maleh* discusses an exemplary embodiment of a synthetic
noise generator used by the decoders. *See FIGS. 1 and 3.* *El-Maleh* uses a multiplier 302 to

multiply a random excitation signal 306 by the receiver gain to produce an intermediate signal x(n) representing a scaled random excitation. *El-Maleh* uses this scaled random excitation to produce a synthesized background noise signal 308, y(n).

Note that *El-Maleh* is explicitly concerned with translating a CTX frame to DTX so that a DTX system can decode it, or vice-versa. *El-Maleh* does not disclose translating the frame back into the original mode. For example, at no point does *El-Maleh* discuss allowing the DTX system to decode the original CTX transmission *as a CTX transmission*. The original CTX transmission is translated to DTX in order to be decoded *as a DTX transmission*.

Thus, *El-Maleh* cannot be seen to disclose or suggest "receiving a frame using a second communication mode, wherein the frame comprises information and a second portion of signal-coding parameters, **wherein the information indicates that the frame is encoded in accordance with a particular communication mode that involves dropping a first portion of the signal-coding parameters** instead of a first communication mode to reduce bit rate during transmission of said frame; **in response to said information**, generating replacement signal-coding parameters," as recited in claim 81. *El-Maleh* does not disclose or suggest that the random excitation signal, nor any other signal or information, is generated **in response to information that indicates that the frame is encoded in accordance with a particular communication mode that involves dropping a first portion of the signal-coding parameters**.

Furthermore, *El-Maleh* cannot be seen to disclose or suggest "in response to said information, **generating replacement signal-coding parameters to replace the first portion of the signal-coding parameters dropped to reduce the bit rate during transmission of the frame**," as recited in claim 81. The synthesized background noise signal 308 described by *El-Maleh* does not replace a portion of signal-coding parameters, let alone a portion that was dropped to reduce the bit rate during transmission of the frame. For that matter, *El-Maleh* does not disclose or suggest dropping signal-coding parameters to reduce the bit rate during transmission of a frame.

It is briefly noted that neither *Proctor* nor *Xu*, considered individually or in combination, is seen to disclose or suggest the above-noted elements of claim 81.

The features recited in claim 81 are not disclosed or suggested in the cited art. *Proctor*, *El-Maleh* and *Xu* cannot be seen to render obvious the subject matter recited in claim 81. Therefore, claim 81 is patentable and should be allowed.

Though dependent claims 82-84 and 127-131 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 81.

Independent claims 19, 75 and 82 claim at least some similar features as claim 81 noted above. For the same reasons stated above with respect to claim 81, *Proctor*, *El-Maleh* and *Xu* cannot be seen to render obvious independent claims 19, 75 and 82. Therefore, these claims are patentable over the cited prior art and should be allowed.

Though dependent claims 76-78, 93-95 and 132-141 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable independent claims 75 and 92.

III.   CONCLUSION

While this Amendment is deemed to be fully responsive to the objections and rejections in the outstanding Final Office Action, the Applicants respectfully reserve the right to argue one or more of the dependent claims when responding to any future actions, such as when responding to further Office Actions or in an Appeal Brief.

The Examiner is respectfully requested to reconsider and remove the rejections of claims 2, 3, 6, 14, 19, 32, 63-65, 67, 69-72, 74-78, 81-89, 91-95 and 114-141 under 35 U.S.C. §103(a) and to allow all of the pending claims as now presented for examination. For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Should any
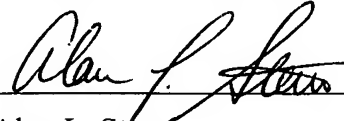
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unresolved issue remain, the Examiner is invited to call Applicants' representative at the telephone number indicated below.

Respectfully submitted:

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__April 20, 2010__
Date

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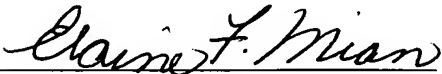4 Research Drive

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